Safety vs Integrity

- the Space Agencies' Ethical and Other Dilemmas

in the 2020s and the 2nd Trump Era

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Preface

Here we are.
It had all been very avoidable. It had all been very clear. And it'll probably all be – worse than currently prognosticated by most of the pundits. It's hard to shake the feeling that the interim period between Trump's not at all surprising electoral victory and the begin of his 2nd administration, if we'll still merely call it an administration some time in the future, a period during which now former President Biden had truly been a lame duck, and during which a not even inaugurated Trump already managed to create diplomatic havoc and actually influence policies not only in the U.S., it's hard to shake this feeling of the broad media personnel being numbed into treating Trump's return to the White House as if things would *not* look very different from here on, an impression already

set off by the repeatedly invoked ‘for the next 4 years…’[1][2]Sweethearts, it’s not only about Trump, the man’s 78 years old and will eventually die, but the party that must no longer be called the Republican Party has set itself up for longer than that. And if the stack of executive orders Trump signed while still seated in the Capitol’s Rotunda implies anything, it’s what above mentioned pundits have repeated over and over over the last couple of weeks as if partly to themselves, that when Trump says something you better don’t dismiss it.[3] An aspiring autocrat will want to do away with everything a, say, Constitution places in his way to allow the return to a democratic normalcy, and you can see some of that in those executive orders, the signatures of which received thundering applause from the more welcome attendees – an aspiring autocrat, when elected, will have moved on, will have left the ‘aspiring’ behind.
Welcome to a world in which all the superpowers – Russia, China, and now the United States of America - have turned autocratic, and you may want to add India to the list. Let me know if you have any bright and brilliant ideas about how to come back from this. And the fallout this causes on more nations, already leaning in this direction or having arrived. Just don’t tell me it’s by voting. Otherwise, what exactly are you not getting?[4]

The inauguration ceremony was…, underwhelming.[5] Trump, used to feed from his supporters’ frenzy during his rallies, was deprived of it, and rambled off his greatest hits from a teleprompter in what was one of his briefest speeches. Nothing surprising, though still enough to nauseate, foremost because, yeah, he meant what he said, even if some of his weirder ideas might have started as gimmicks to then turn into obsessions he’d grow indeed serious about (Greenland and Panama Canal eerily connect to the word ‘expansion’ used in the inaugural speech). Unsurprising yet nauseating the presence of the spineless backbone to the first period of the new Trump area, the super-rich tech billionaires as special guests. And fully announced and still fully nauseating those stampede executive orders.
Some of them still hurt, intensified the nausea. Arguably worst, the U.S. withdrawal from the Paris Agreement while ensuring the fossil fuel extraction industry their wet dream. This, too, has to be seen in global superpower context. While China had made notable steps to mitigate the effects of CO_2 - and CH_4 emissions, it has done just as much to negate these advances. And in Putin the newly sworn-in President Drill, Baby, Drill is meeting President I’m Already Drilling, Baby. Newsflash: the Arctic is among the fastest warming regions on the planet, with devastating effects, and half of it is currently controlled by Russia. We’ll see how other nations will react, including those making up

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1 https://www.theguardian.com/us-news/2024/dec/29/trump-greenland-panama-china-threats
https://www.theguardian.com/us-news/article/2024/may/23/senate-democrats-immigration-border-bill

2 Trump and the almost entirely obedient members of a party that cannot even be called Republicans anymore while keeping a straight face have begun to follow up on some of the promises, some would call them threats, made, and we’re getting a first sense of just how different things will be even compared to his first time in office. With what can only be interpreted as attacks on sections of the U.S. Constitution (e.g. the attempt to end birthright citizenship) there should be no doubt that Trump, and his party after him, will attempt to stay in power by all, including illegal means, and further the degrading of democracy in the country.

3 Wikipedia is trying to keep up with Trump’s executive orders for us:
https://en.wikipedia.org/wiki/List_of_executive_orders_in_the_second_presidency_of_Donald_Trump

4 The powerful tool of voting only works when all of you are allowed to vote. In an autocracy voting is an open joke, used only to create the impression of landslide wins, often to a ridiculous extent:
https://www.theguardian.com/world/2025/jan/26/belarus-presidential-election-alexander-lukashenko-on-course-win
You’d have to have a lot of faith in the institutions of the U.S. to protect the country and the world from Mr. Trump’s desire to become the unimpeded ruler, and from his party’s attempt to remain in power for good, specially as we’re watching these institutions failing one by one to do exactly that.

5 If you feel like it, knock yourself out:
https://www.youtube.com/watch?v=BNArBr_J8mA

the African continent, a continent mostly innocent of the crisis we have created. 2nd newsflash: the alliances of many African nations are currently for sale. And it's Russia that's buying.
Nauseating the incomprehensible U.S. withdrawal from the WHO, to which the U.S. has been the strongest financial contributor. That after a world-paralysing pandemic that should have taught us lessons, that after the leader who had bungled his country's response like barely another, this with anti-vaccination mentality on the rise and more viral and bacterial threats surely to re-enter our consciousness.[6]
Nauseating the pardon of 1500 violent insurrectionists that will effectively view themselves as Trump's militia, and don't believe for a second that he won't.[7]

With these and all other nausea-causing Day One actions in mind, it's an equally unsurprising one that has triggered this little effort, and it may at first seem odd that the plan to get humans to Mars as announced by Trump and instantly celebrated by Elon Musk in his trademark cringy manner would nauseate this author, who, after all, is a fervent supporter of space exploration, of the space industries and their affiliates, and indeed of seeing human boots on Martian soil. Especially given that, barring potential sequences that would lead to our destruction before we'd manage this, a crewed mission to Mars will eventually happen, no matter what.[8]
But it's a call-back. It's not even the embarrassing performances of Trump and Musk at and after the inauguration. It's only partially to do with the thought of the to be formerly called Republicans or even Trump himself residing over this milestone (note that even if everything would go perfectly from now on that moment likely lies significantly more than 4 years away from us, but as said, prepare for a very long ride with those types in power), though there's all that. And it's only partially to do with the thought of more ego-boosting to the fraudulent betrayer of terrestrial progress, Elon Musk, as perhaps being the one delivering the first human presence on another planet. And there's definitely that.
The call-back notion results from the role the space agencies, most importantly NASA as a U.S. governmental institution, are finding themselves in, because twice I've already wanted to collect my thoughts on this. I'm thankful to, indebted by and in awe before the accomplishments of NASA, ESA, JAXA and other agencies and organisations, not alone because I deem exploration as vital by its own virtue, but also because I know how absolutely important it is for our (terrestrial lifeforms) long-term survival.[9] I'm an unknown friend to the space agencies and their affiliates, one who

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6 https://www.theguardian.com/world/bird-flu
https://www.who.int/emergencies/disease-outbreak-news
https://pmc.ncbi.nlm.nih.gov/articles/PMC11627490/pdf/1124-9390_32_4_2024_463-477.pdf
https://www.theguardian.com/us-news/2025/jan/20/trump-executive-order-who-withdrawal

7 https://www.theguardian.com/us-news/2025/jan/20/trump-executive-orders-jan-6-pardons

8 Besides global ecological collapse that would arguably also bring forth civilizational collapse and bear with it the danger of more military confrontations, there's also the threat of thermonuclear confrontation, and you'd be amiss thinking that danger is being lowered by the emerging authoritarian nations acting as buddies. As a rule dictators are thin-skinned, paranoid, impulsive and deluded, and allies of that type may quickly turn rivals and enemies. Keep in mind that Stalin's Russia had been an ally of Western nations once.
In this context it must also be remembered that the biggest danger during a nuclear stand-off isn't necessarily intent, but miscalculation, accident, mistake and misinterpretation:
https://en.wikipedia.org/wiki/Nuclear_close_calls
You may bear Mr. Trump's favour of staying unpredictable in mind, the arguably worst idea when it comes to the potential of nuclear confrontation.
Paul R. Ehrlich, Carl Sagan, Donald Kennedy & Walter Orr Roberts - The Cold and the Dark, 1985, W.W. Norton & Company, ISBN 13: 9780393302417

9 https://www.nasa.gov/
https://www.esa.int/
https://global.jaxa.jp/

doesn’t matter. In friendship critique is a gift. And not everything that led up to the massive dilemmas the agencies, governmental or not, are facing had been out of their control.

There are reasons for everything, every time. Choices are being made in good faith, only to result in calamity or catastrophe later. Even those most invested in true progress, even those with the most potent intellectual tools to drive it, may be mistaken in how what they do will translate into social reality, may underestimate factors, may see themselves forced into caution, and may make mistakes. They may also navigate themselves into protective bubbles.
There are reasons for why an agency or an individual may be trying to maintain absolute neutrality, beyond the point where this is even possible, and not noticing it, and those can be very good reasons indeed. That’s what a dilemma means. To eventually reach a position from where every move isn’t desirable. From where every decision will include its demerits, often harsh ones. A position from where escape, no matter how, will always result in dissatisfaction.

But there’s always a path there, and an analysis of this path is always necessary to prevent a repeat. Even if the time when doing it better may be in a far distance from us now.

1. A Russian Prelude: A Dark Alternate Scenario vs A Still Dark Reality

When Dragon finally carried its first human passengers into space the blend of emotions on behalf of the space community, everybody emotionally and/or professionally involved in space exploration and other space-related sciences, was a joyful one. The capsule on the rocket, both developed by private contractor SpaceX, was good news in so many respects, and all of it combined in the feverishly awaited advantages a U.S. American-launched vehicle capable of carrying personnel to the ISS provided over the much too long lasting dependency on Russian Soyuz vessels.[10] [11] [12]
Even those who, to use a diplomatic euphemism, had already grown weary of the escapades of SpaceX’ founder and CEO Elon Musk could only welcome this return of an American space delivery system. There is much to say about Musk, and there is much to say about the conflation of him and SpaceX as frequently generated by the general public, and why, at the end of the day, this conflation may at this point appear as being in fact justified, and I’ll approach this in the section following this one. And, as we shall see if we don’t already, there’s a price tag attached to even some of the favourable outcomes.

The successful launch came right in time. It came in the nick of time. A previous Demo-launch had taken place in March, 2019, and this Crew-Demo now on March 30th, 2020, carrying two NASA astronauts to the ISS. A single launch, docking and return of this kind is only a single success, for a program to prove itself it needs equally successful follow-ups. Those came with the launch on November 16th, 2020, carrying three NASA astronauts and one JAXA astronaut, and on April 23rd, 2021, carrying two NASA astronauts, one JAXA- and one ESA astronaut. With that the program of once again launching personnel from U.S. soil in U.S.-built spacecraft since the Shuttle program was established.[13]

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10 https://en.wikipedia.org/wiki/SpaceX_Dragon_2

11 https://www.nasa.gov/international-space-station/

12 https://en.wikipedia.org/wiki/Soyuz_(spacecraft)

13 https://en.wikipedia.org/wiki/Crew_Dragon_Demo-2
https://en.wikipedia.org/wiki/SpaceX_Crew-1
https://en.wikipedia.org/wiki/SpaceX_Crew-2

Putin's Russia launched its full-scale invasion into Ukraine at the end of February in 2022, less than a year after SpaceX Crew-2, that third crewed Dragon vessel launched, resulting in a devastating war that is still ongoing at the time of writing.[14]
Less than a year might still seem long enough to some to exclude any worries relating the two events, except when you start thinking about it a little.

Let's imagine an alternate but quite plausible timeline, caused by a plausible different chain of events.
One imaginable chain would consist of Dragon simply taking a little more time. You know. A few more exploding rockets on the way, and the fact that the number of things that can go wrong before, during and after each launch is staggering.
Or.
Imagine the COVID-pandemic hadn't happened.
It is actually quite possible that Putin had planned to launch his campaign into Ukraine much earlier, meaning at a time when his buddy Trump had been the U.S. President for a first round, and that the pandemic had in fact delayed the invasion.[15] The timing would be in support of this idea.
Which would already leave us with something really hard to say out loud, the real possibility of a silver lining in a pandemic that has killed at least 7 083 246 people, according to the latest official WHO count at the time of writing, probably a substantially larger amount, and leaving countless more people at least temporarily impeded, some of them permanently.[16]
A silver lining, because with Trump still in the White House then a sufficient military and financial support provided to Ukraine without the U.S. is hard to imagine, and we'd be living in a very different world now. Though that world may still come.

The problems, to once again use a euphemism, this would have meant would likely have overshadowed the resulting situation of the only nation on the planet with the capability of launching human beings to the ISS being Russia, but there are good reasons to take notice. We received a very slight taste of this particular potential problem when, in our real timeline, then Roscosmos General Director, Dmitri Rogozin, enraged by the internationally imposed sanctions following Russia's war in Ukraine, made a series of threats, including the insinuation that the ISS

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14 https://en.wikipedia.org/wiki/Russian_invasion_of_Ukraine

15 When or when not the pandemic was declared 'over', and in what country, was often down to political decisions rather than medical one. It is commonly very hard to determine a clear end of an outbreak that envelops the entire planet, lasting with more impact and potential flaring up in some regions longer than in others, and this particular virus is still among us, still causes illness, and still causes death.
Putin's habit to have even state guests sitting at a long table from him into after the crisis had been declared more or less over probably had 3 reasons, the main one likely the equivalence of Hynkel's smaller chair for the Mussolini character ('The Great Dictator', 1940, written and directed by Charlie Chaplin), except for buddies like Lukashenko, then also to prevent possible assassination attempts, though such an attempt would be highly unlikely with state guests. The third reason would have been fear of infection. Dictators and those aspiring to become one may not care at all about infection rates among their own people, but they tend to think differently when it's about themselves.
There are good grounds to argue that, had Putin began his invasion into Ukraine during Trump's 1st presidency, U.S. financial and military aid to Ukraine would have been scant, likely non-existent. Without that aid, the most substantial when counted in our reality, Putin would have taken Ukraine. The timing suggests that Putin may have taken the opportunity provided by Trump in the White House, while the invasion commencing after the worst of the pandemic and with Biden as U.S. President confronted him with enough aid to Ukraine for the invaded country to resist for as long as until today, and also with sanctions imposed on Russia.

16 The current total count of deaths as estimated by the WHO stands at 7 083 869:
https://data.who.int/dashboards/covid19/deaths
I should note that I'd checked a couple days earlier, when the count was 7 083 246.
The real total amount is likely higher.

would go into an uncontrolled deorbiting without the Russian module, and threatening to essentially maroon NASA astronaut Mark T. Vande Hei on the ISS, who was still scheduled to return in a Soyuz, even going so far as to have a mock-up video produced, showing Russian cosmonauts leave him behind, again coupled with an play-enacted uncoupling of the Russian module. Those are just a few of the instances of boorish and brutish frolicking of this gentleman.[17]
The threats led to a confrontation between Rogozin and astronaut Scott Kelly, who reacted forcefully to the big No-No within the professional space community, namely the threat of marooning an astronaut or cosmonaut.[18] Meanwhile NASA Administrator Bill Nelson chose the more cautious approach of downplaying what he called Rogozin 'spouting off' from time to time, while citing the other personnel in Russia's space program as professionals.[19] It is this author's belief that Kelly's angry and energetic response contributed more to Vande Hei's eventual safe return than Administrator Nelson's timid comments that, besides displaying weakness towards rather severe and unprecedented threats within a context of a hot war, also neglected the reality of Roscosmos being an agency under Putin, the reality of what a dictator means, can do, and might do – there is no such thing as a Russian agency that operates independently from Putin.

In our alternate timeline, where SpaceX' Dragon isn't ready at the beginning of Russia's invasion of Ukraine, imagine Russia sealing all access to the ISS to all astronauts other than those belonging to ally-nations, thus essentially turning the ISS into a RSS.
With all possible applications that would bring.[20]
You may also imagine the hostage-taking of NASA- and ESA astronauts, whether it's those still present on the ISS or present in Star City, having trained for their Soyuz launch.[21] Just for the sake of anticipating ESA- and NASA personnel who've worked with cosmonauts and who might argue that they know them and that they'd never do anything like it, I'd say, yes, I understand. And have you met their families? Once again, we're talking a dictatorship. And we're talking a war. A war

17 https://abc7ny.com/russia-international-space-station-mark-vande-hei-iss-american-astronaut/11639556/
https://en.wikipedia.org/wiki/Dmitry_Rogozin#2022_Russian_invasion_of_Ukraine

18 https://www.wsj.com/articles/ex-nasa-astronaut-scott-kelly-calls-out-russia-space-chief-in-spat-11646965669
https://en.wikipedia.org/wiki/Scott_Kelly_(astronaut)

19 https://www.theguardian.com/science/2022/mar/19/nasa-iss-ukraine-war-russia-cooperation
https://www.reuters.com/world/europe/nasa-shrugs-off-roscosmos-leaders-rant-over-us-sanctions-space-station-2022-02-26/

20 There'd be plenty.
The American space program is an economic driver, with more output created than tax input. Besides jobs inside the agency and outside with contractors, innovations made for and within NASA and JPL routinely create applications outside the agency and their programs, most tangibly in form of technological spin-offs, I recommend having a look at the annual spin-off reports:
https://spinoff.nasa.gov/spinoff/archives
A substantial amount of the research resulting in these is done on the ISS. A Russian take-over would have dialled these efforts back, with an effect on the U.S. economy. The same would go for any other nation making use of the ISS.
The ISS is also vital for multiple other programs and divisions that deal with exploration and assessment, notably that of the climatic impact of human-produced greenhouse gases and the combating of the consequences. Putin-led fossil fuel-nation Russia would welcome to impede such efforts.
The ISS is an important location to investigate the remaining challenges of returning humans to missions beyond Low Earth Orbit, i.e. the moon and Mars. A take-over would have delayed such and other missions, with great impact on the space program, and thus again great impact on economies, not to mention prestige.
There are also more sinister potential applications, some of those for which the ISS was not designed but could be retro-fitted. Turning the station into a location to spy from would be easy, with all the highly sensitive observation tools already on board. Last and not least, there's be the possibility of using a RSS for military purposes.

21 https://en.wikipedia.org/wiki/Star_City,_Russia

that is also a less than an indirect conflict with the U.S. and the EU. If you'd be confronted with a choice between following unacceptable orders and the safety of your family, what would you do? Besides, the Soyuz still touches down in Russian territory, so nothing would be up for the cosmonauts to decide.
A take-over of the ISS by Russia, meanwhile, would have dramatic consequences. It would cut the rest of us off from space, no matter what vehicles would eventually be built, unless we'd fast-track a new station in rather unrealistic record speed. And it would give Russia a literal high ground, including strategically speaking, with possible applications not thought of when the ISS was constructed.

This is where our two timelines begin running in a more parallel manner, before eventually merging.
In this scenario we'd have NASA and ESA, and probably also JAXA, but NASA certainly and most prominently, standing before a singular dilemma. One choice has NASA acting in full accordance of the situation of Russia's unprovoked invasion of a sovereign nation and the resulting international reaction, which include sanctions against the invader. Soyuz-rides don't come free. They cost money.[22] This choice would mean surrendering the ISS to Russia, as in our scenario neither of the other space agencies possess a delivery vessel.
The other choice would have NASA approach the U.S. Congress to ask for an exemption from the sanctions. To argue for NASA- and Roscosmos cooperation as being the one area between the two nations that remains free of conflict, dedicated to the furthering and bettering of humankind, and that it must continue to remain so, not last because of the example this is setting. In other words, declaring NASA remaining neutral in the matter as necessary and beneficial.
Even irrespective of the fact that NASA is a governmental agency and therefore *not* neutral by default, that second choice would still have ethical ramifications already due to the continuous use of a space craft operated by an agency belonging to a quite murderous adversary, the bond between individual astronauts and cosmonauts notwithstanding, and certainly in context of Soyuz rides having to be *paid*. The list of reasons for questioning why NASA, ESA and in extension Roscosmos should be exempted from international sanctions as reactions to the unprovoked invasion of a sovereign country by an expansionist dictator that is resulting in countless deaths isn't short, and it is certainly justified.

And here is why the two timelines are now running closely parallel to another, why they're merging.
To one's potential astonishment, and quite possible dismay, astronauts continued to launch within Soyuz vessels.[23] We're now in our timeline that includes a fully operational Dragon. With the war in Ukraine in full process. With numerous sanctions against Russian individuals and institutions in place. With many people dying.
→One possible explanation would be that those Soyuz rides carrying NASA- and ESA astronauts to the ISS had already been scheduled and prepaid. Scheduled they most certainly had been. And the

22 A May 24th, 2024 article on payloadspace.com named the sum rather vaguely as $86 million per seat 'in recent years':
https://payloadspace.com/starliner-by-the-numbers-payload-research/#:~:text=In%20the%202010s%2C%20NASA%20relied,per%20seat%20at%20%2490M.

23 https://www.theguardian.com/science/2022/sep/21/us-astronaut-and-russian-cosmonauts-arrive-at-international-space-station
To be clear, a cooperation of this sort between two adversaries should be viewed as desirable in general. And keeping the tension out of the comprised space all these nations have a right to share is crucial, as they are dependent on each other while up there. The questions in this case are simply about the money in the context of sanctions as well as the danger of hostage-taking. One may also want to ask how this cooperation has translated into effect here on Earth.

money would optimally have already changed hands. Might as well get what we paid for. Phase it out from there, as planned.[24]
This makes perfect sense, because, new rocket and capsule or not, we're not at a stage where we can conduct daily launches yet, those launches are few, and a continuous presence of non-Russian occupants on the ISS is important as it is, it has become more important now for the reasons stated above. And if there's any cooperation still going between superpower adversaries, especially at the mutually beneficial front of science, innovation and exploration, that's a good thing.
The question is how far you are willing to go for this. When will the threshold be reached beyond which the ethical concerns outweigh the proposed benefits? In the eyes of the public the more present types of examples for this balance act is typically found in sports. Russian athletes have displayed the Z-sign on their tricots, and Ukrainian athletes refused to shake hands with their Russian opponents.[25] Clearly the set-up is already highly charged, not neutral, and not bringing everyone together. I have only watched one recurve archery match involving the North Korean team (men), shooting against the (extremely hard to beat) South Korean team.[26] There's always the question of which matches are being recorded and televised or streamed, of course. But it was so far the only recent match involving a North Korean team I could find. Teams will shake hands after the match, and they did, let's just say it looked awkward.
The Taiwanese sorts teams are still being called the team of Chinese Taipei to placate China, and they're also forced to display a specially designed flag and tags. Not too long ago a supporter of the Taiwanese badminton team had enthusiastically posed with a flag displaying the island of Taiwan, along with the words 'Go Taiwan'.[27] She hadn't wanted to protest anything. She was being led out by security.
Over-caution, and in the cases of Russian and Ukrainian athletes ideology and a sense of national integrity respectively. Those things won't disappear once you've crossed the diffuse boundary into space. A fresh batch of Russian cosmonauts dispatched to the ISS after the Russian assault on Ukraine were initially hailed for their assumed choice of yellow and blue pressure suits for the transfer, and they hurried to assure everyone that these had simply been the suits available, and that no political statement should be seen in these colours.[28]
Staying neutral is not always a choice guaranteeing success. In fact, it rarely is. And it surely isn't always the morally promising one. I'd argue, it very rarely is.

Besides the choice of continuing with those Soyuz hitches being a potential subject of ethical concern that won't be quietened by arguing that they do not constitute a circumvention of sanctions since they'd already been arranged and paid for, they also pose the threat of hostage taking, as said.

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24 I have no idea, and could not find a reliable source explaining how exactly this transaction is being conducted.

25 Russian athletes displaying Z-sign:
https://www.theguardian.com/sport/2022/mar/07/shocking-behaviour-russian-gymnast-shows-z-symbol-on-podium-next-to-ukrainian-winner
https://www.theguardian.com/sport/2022/mar/23/russian-athletes-face-backlash-after-wearing-z-symbol-at-putin-rally
Ukrainian Sabre fencer Olga Kharlan being disqualified after refusing the handshake:
https://www.bbc.com/sport/fencing/66322668

26 Recurve Archery men's teams, Asian Archery Championships, South Korea vs DPR Korea, Bangkok, 2019:
https://www.youtube.com/watch?v=KHrjByFYxwc
The direction of the recording isn't very good, but there are plenty of examples to witness the might of South Korean recurve archers.

27 https://www.theguardian.com/world/article/2024/aug/07/were-not-doing-anything-wrong-why-the-word-taiwan-is-banned-at-the-olympics

28 https://www.theguardian.com/world/2022/mar/20/russia-denies-iss-cosmonauts-wore-yellow-and-blue-suits-to-support-ukraine

The argument could be made that NASA and ESA allowed for a security risk by exposing their astronauts to the very possible danger of being detained for the purpose of blackmail. And if you're a representative of these space agencies and explain that assurances had been given, again, you'll have to go home and start understanding what a dictator is. There would have been nothing to prevent this had Putin decided to go that way.
The difference becomes stark when we see it the other way round, because we can. Russian cosmonauts have been given a lift on the Dragon.[29] So an exchange arrangement. But those cosmonauts were in no danger of being taken hostage by the U.S. And the U.S. had not been the country invading Ukraine.

The by far best argument for keeping things as they are onboard the ISS, regardless of the political situation down below, is that it is a real good idea when it comes to confined spaces. Those people have to live and work together, they have to rely on another, and there's no quick and easy way to just return to the surface of the planet if things don't work out.[30]
Tensions might still arise. They probably do. And there's more than enough infiltration of terrestrial reality. System faults like a hole in a Soyuz may endanger the whole international crew, and they might draw the accusation of sabotage.[31] Before the people and peoples down on Earth can react, it's the folks up on the station who're the first to having to deal with this.

Naturally all of this also has a PR side, and it's not to be underestimated. If there are publicly easy to access statements about the continuation of NASA- and ESA astronauts' Soyuz rides during a time of war crimes and related sanctions, I haven't found them, and that would probably mean they're hard to find. The launches themselves had been publicised, of course, the agencies announce every launch. And although it is typically enthusiasts who regularly skim NASA's and ESA's websites, the news of these launches will have reached at least some of the rest of the population, and some of those will have asked themselves precisely these questions. And whether or not you'll have a good answer, the questions are justified.

Public relations are big with NASA, and they're big with ESA. There's funding to be approved of, approval that'll decide the fate of missions on which there'd already been years if not decades of work done, missions that promise to further our knowledge, improve the work done in space and the life we have here on Earth, help us assessing the threats the universe imposes on us, help us assess and counter the climate catastrophe, and missions that might change everything in our understanding of nature, our assessments and the way we best go about to counter the challenges. Important stuff. And budget approval is done by a political body, in the U.S. a requested budget is brought before Congress. Approval is to some degree a subject of what the public will think, as it's the public who'll elect the party putting the individuals in the seats from where to make those decisions, individuals who'll in turn seek approval of the electorate.
Of course there's much more to public relations and opinion. The space agencies strive to get people enthusiastic about the adventure, and, along the way, informed. Get them savvy. A vital pillar on which to build the structure of progress. And the communicators of science and exploration will frequently express optimism. So many enthusiasts. So many young ones, especially. Our future.

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29 More recently:
https://www.bbc.com/news/science-environment-68465056

30 It should be noted here that, when talking about the ethical and other choices, we're talking about the agencies, not the individual astronauts. Refusing a launch, the opportunity of which wouldn't likely return any time soon, would result in nothing but an empty seat. And given the close proximity and need to rely on another onboard the ISS gets astronauts and cosmonauts together on the closest level, where this cooperation no longer remains an abstract, perhaps even political manoeuvre, but is indeed working.

31 https://www.theguardian.com/science/2022/dec/23/latest-soyuz-capsule-leak-prompts-russians-to-plan-possible-rescue-of-space-station-crew

The experience of the common Joes and Janes arguably differs a little. It's one thing to be a Neil deGrasse Tyson and draw seemingly huge numbers of space fans to a large venue.[32] You're on the stage, you're Dr. Tyson, and the impression will surely be impressive. You might think, indeed, the geeks are in the process of inheriting the world. Keep in mind, though, that the people you see in the auditorium are likely from places extending beyond the city you're in. Many will have travelled to see you. That already dilutes the significance of the number. Spreads out the figure over a larger area. If you'd spend some time in the poorer quarters of cities and larger towns, the lower middle class districts if you want, in other words where most people of the so-called Western world live, the picture will be a different one. Geeks who're into the exploration beyond Earth's atmosphere, indeed into exploration per se, aren't just a clear minority. They're a vanishing one.
Most people you'll find in these quarters might voice momentary interest when confronted with anecdotes. Astonishing facts relating to the solar system and beyond, or to other species of animals, or terrestrial phenomena, physics and chemistry. Rarely they'll pick it up once they've returned home. Rarely they'll change their internet and TV diet according to what you just told them. Remember that during the COVID lockdown people did just about everything to while away the time, including complaining about having to, meanwhile one of the activities on offer appears to have been widely rejected, namely getting oneself properly informed about what viruses are.

People think they have better things to do than getting informed about space missions beyond what a brief item on CNN or Fox News will let the know. Let alone getting enthusiastic about it. It's not only the daily problems and challenges that will naturally increase the less money you have, it's also the preference of more mundane and trivial means to spend the few hours one has left to distract oneself from these problems with. If you look beyond the walls of the auditorium and at what is generally known as most people, guess which program will end up with the higher rating, the NASA live stream or America Got Talent?

If information is scooped only to a liminal extent, often just by means of headlines, anything that could be ill perceived by the public will likely end up ill perceived. Getting out front with explaining decisions that might fall into this category is needful preventive action. The bad news is that the general public is at best mildly tolerant of those missions, some of which that may change the course of history. They're not behind you, even if the small number of enthusiasts may suggest this to you. That's only because you seem to see only them.
Add confusion and misinformation to this, and the agencies may soon find themselves in reputation troubles. Add even generally well-meaning pundits with large platforms, not to mention those who don't mean well, and you may end up with fall-out that effects budgets. Viewers watch celebrity, viewers believe celebrity, viewers complain to their representative, representative placates viewers in exchange for re-election.
Bill Maher is surely well-meaning.[33] He's got his heart in the right spot, he's aware of the seriousness of the climate catastrophe and he's got solid political instincts (though at times terrible instincts when it comes to individuals[34]). He sucks at doing his homework, though. And that's bad enough, that alone puts him in one and the same corner with his more right-leaning counterparts.

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32 https://en.wikipedia.org/wiki/Neil_deGrasse_Tyson#

33 https://en.wikipedia.org/wiki/Bill_Maher#

34 As a prime example of that, here an interview with former Stormy Daniels lawyer Michael Avenatti on Maher's show Real Time – do watch till the end; not to brag, but I could have told him then that Mr. Avenatti is just *wrong* (as in dubious). 'Oh, my prophetic soul.' Besides clearly viewing his own media appearances as more important than doing effective work for his client, Mr. Avenatti was later arrested, charged, prosecuted and convicted for extortion, fraud & embezzlement and theft of book proceeds from Stormy Daniels:
https://www.youtube.com/watch?v=-vYVDPbL_EA
https://en.wikipedia.org/wiki/Michael_Avenatti

Whether it is about something you support or oppose, you've got to understand the basics, in the very least. If you don't you'll cause more harm than good, beginning with your own battle.
Some years ago Bill Maher went on one of his anti-space exploration rants.[35] He appears to be generally sceptical about space exploration, considering it a waste of resources that'd be more urgently needed down on Earth. Never mind that this exploration includes everyone's favourite planet and the havoc we're causing on it. He was specifically triggered by Trump, this was during his first time in office, announcing a massive funding boost to get humans over to Mars while boycotting the EPA, the topic of human boots on Mars having once again come up during Trump's latest inauguration speech and meeting joy in his buddy Musk, presumably it's Musk more than NASA who Trump bets on in this respect.
I won't get into all the specifics of Maher's closing monologue, suffice to say that the single impressive thing about it was how many mistakes and wrongful assumptions he managed to cramp into a ten minute speech.[36] It would take a good hour to unravel the ignorance-based errors, and that

35 https://www.youtube.com/watch?v=mrGFEW2Hb2g

36 Okay, just a brief counter: aside from the millionaires' agendas, NASA's, ESA's, JAXA's and other agencies' interest in Mars, including their reasoning for wanting boots on the ground are at this point more exploration-based, which includes urgently needed planetary comparison (you may read through their pages' mission statements). Trump's Mars announcements (he very clearly has no understanding of planet Mars) don't match the reality of a crewed mission, that could only be realised way after his 1st presidency ended, since the monologue was made during that time, and we'll see later how it works with such missions and time scales; while it is true that Trump boycotted the EPA in numerous ways, it's not EPA funds any Mars mission would benefit from, meanwhile Trump also attempted to slash funds for NASA's Earth Science division (Congress approves NASA budgets division by division, and presidential recommendations, NASA requests and Congressional approval never match another, and it's really Congress making the decision, the president can only recommend). As for Bill's 'Mars Facts': all of what is accurate is known to everyone at NASA, ESA and every other space agency. He has learned those facts from representatives from their midsts. Nobody there thinks of Mars as an oasis, on the contrary. As for these facts, air, it should have been *breathable* air, for air there is on Mars, just… So you have to bring it, yes. Or create it there. Maher must also be against scuba diving. Or against establishing important underwater research stations. Food. Yes, you have to bring it, or learn how to grow it there. Cold, yes, and it also gets very cold at Antarctic research stations like Concordia, a place where you'll also have to stock supplies for much of the year, as there's no way in or out during the dark Antarctic winters. Stations we very much need. They're also exposed to more radiation, due to the still existing ozone hole. Because he forgot the most important obstacle, the one we haven't yet licked, radiation. On the way and on Mars. None of the serious brains with the agencies wants to send people because it's comfortable. Earth vs Mars? How about both? It's not a budget problem. The money is there, it's the *allocation* that's badly managed (with intent), and NASA's budget doesn't hurt the tax payer. What hurts the tax payer are by far more expensive and fully redundant hobby projects of state-local house reps such as weapons manufacture of hardware that'll never be used, but are costing *trillions* (in plural), just because their manufacture create jobs that get these officials re-elected. But yes, a crewed Mars mission would be more expensive (more than the sum Bill suggested). Which is why it'd be preferable for it to be a multi-national venture. And there are ways of paying for it without taxing the people more, e.g. live-streaming the journey (revenues). Forget the billionaires for a moment, there are other reasons for scientists and engineers to be interested in getting to Mars. Bill Maher doesn't seem to be interested in geology, even though it's the window into the past, rocks being the pages in the biography of a planet, including ours, and anyone with such an interest will look to Mars with eagerness.
As for the expansion of our presence beyond this planet, Musk isn't the only one who said it, so forget him for a moment. Yes, eventually we have to. Ask almost every species that has ever lived on Earth. You stay put, eventually you'll go extinct. Not just by our own fault. Look up -
- loss of magnetosphere, without which all life on a planet will be rendered impossible. Planetary comparison: both Mars and Venus have or are in the process of losing theirs. That's 2 out of 4 among the inner rocky planets; 2 out of 4 signifies a trend. There's no guarantee that ours will last 'forever' (also, *really* worth investigating Mars for the purpose of understanding loss of magnetic fields, because we so don't yet, and everything done by landers and rovers in years and decades could be done by humans within days if present)
- solar heating. The window for life on Earth is small. Of the approx. 5 billion years Earth has left before the Sun will blow up to a red giant, life has less than 1 billion (at *most*!), during which the sun will become ever hotter, until all oceans will have evaporated and the carbon cycle will have ended
- asteroid and comets of the wrong size
- gamma ray burst; a gamma ray burst emerging from an exploding heavy duty star, e.g. a Wolf-Rayet star, not ideally angled for us and too close for comfort, wiping out all life on Earth in an instance. Not too likely, but bad luck is just bad timing.

Those are just a few of the threats not too many people are talking about. In order to ensure long-tern survival, you

only if one isn't interrupted, and he's not good at letting people finish their sentences either.[37] The main erroneous thread running through the rant was complete unawareness of the most simple basics of U.S. American space policy. This author is neither an American citizen nor do I reside in the United States, and I know a hell of a lot more about space policies in the U.S.[38]
Naturally his fans in the studio met every punch line with frenetic applause, and it's to assume that his viewer base reacted similarly. It's clear from the applause that those fans had been just as ignorant about the facts he was raving about as he was. Quite like with the geeks in the auditorium, it's easy to be reaffirmed in one's position if you have a whole audience, in situ at the studio and in front of their screens by the millions, behind you no matter what.

PR problems are serious because ultimately you need the people behind the respective idea, program and mission. The way to get them there is making sure they're informed. Unfortunately the majority of people don't want to do the necessary homework. They're quite like Bill Maher in this respect.[39] The only things one can do about that would have to start in the class room, and with teachers who've retained their passion for their subjects better than most teachers have managed. For everyone else the agencies have their own media presence and churn out good educational material about their missions and their background, on social media packed into bite-size videos tailored to the shrinking attention span of users. They're doing a pretty good job there. That they have to compete with an ever growing number of pseudo-science channels, self-declared pundits and charlatans, not to mention the wilful spreading of falsehoods, isn't their fault.

But PR issues aren't just created outside the establishments. Each institution has plenty of potential to come up with their own. Sometimes they're unavoidable. Sometimes they're the result of poor understanding about how an organisation works and about their limitations, about what's at stake, and sometimes it's simply the onlooker's refusal of giving the benefit of the doubt where it's about someone we don't know and something we don't have all the information about, and this some place where we haven't been present.
I have absolutely no knowledge about what moved then outgoing NASA Administrator Jim Bridenstine to praise then President Trump so completely out of context when celebrating a successful mission.[40] Same goes for everyone else watching. And it was confusing, seemed

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got to leave your hill eventually. You'll need more than one presence.
And you got to start early, as you won't learn the How without the process of doing.
How was that for a rant? And this is the short version. Bottomline, Mars ambitions don't have to stand in the way of fixing Earth's problems.

37 I've failed to find a clip showing Neil deGrasse Tyson being on Real Time with Bill Maher the next time following the anti-Mars rant, I believe it could have been the very next show, and where Dr. Tyson could hardly get an explanatory sentence in when the two were discussing the previous monologue. It makes you wonder what happens in the green room.
Interestingly, and unfortunately I couldn't find a clip of this either, but there are reports on the encounter easily to find, in 2012 Tyson was on the show along with former General Motors Vice President Bob Lutz, a climate crisis-denier and strangely likeable guy. Both Maher and Tyson tried desperately to get Lutz out of his bubble, with Maher repeatedly indicating Tyson and asking Lutz to 'listen to the *scientist…*!'

38 This can always be helped if you're a U.S. citizen and interested in your country's space policies. The go-to guy here would be The Planetary Society's Casey Dreier:
https://www.planetary.org/profiles/casey-dreier

39 There are more examples of Maher's reluctance for doing homework, notably and worryingly when it comes to viruses, the outbreaks they cause and vaccines, for instance. It's a rather selective problem with him, but where it applies it creates exactly the same kind of bubble he routinely and rightly accuses Republicans of inhabiting. Bill's Bubbles are equally ideologically characterized, and also the result of not wanting to review what he thinks he knows better (aka arrogance)

40 Once again I couldn't find a clip relating to the moment described, I apologize.

completely misplaced. The easiest thing always is to jump to conclusions and stick with them. Alternatively one might take the question Why seriously.
Bridenstine had initially been a worrying pick because his climate change scepticism was on record, and that's alarming, given the important role the agency plays in understanding and combating the threat. He turned out to be a capable administrator who put his old views in a drawer for the time of his service, and who might have even reversed them. So, why? Why this forceful and emphasized thank you to Donald Trump? Why in that moment?
Again, I'm in no position to know, but it is precisely the timing that got me thinking. Bridenstine knew Trump, he knew how capricious Trump is, and both of them were on their way out. In the meantime Bridenstine had become a member of the NASA family. So it could well be that he made a last ditch attempt at preemptively pacifying Trump, for which unconditioned praise is just the way to go about it. Trump was more than capable to inflict harm and damage to anyone displeasing him last minute before his presidency ended, just out of spite – he was equally capable of this even *before* he won the election this time.[41] Bridenstine might have thought of Congress, and of all the ambitious, expensive and labour-rich missions at the mercy of approval. These simple, odd seeming few words would have put the desirable emotion into Trump: 'NASA loves me.'

Because NASA is a government agency the limits of what can and can't be said, of how can be reacted, of how its employees can partake in an open conversation and express their personal views, are tight. Caution's the word. And with everything that's at stake caution is the law. Programs that aren't flagship missions undergo rounds of selection- and elimination processes, not unlike the admission rounds aspiring actors go through at drama schools. As with these the number of applications is far higher than those that'll be green-lit, unlike as with drama schools the rejects have actually grown inside the house. Each of these mission proposals are worth the money, time and labour that have already been invested in them, each of them are promising, fascinating and needed, years have been spent on them, but the budget allows for only a few of them. As for the flag ship missions, we're already talking decades of development, and the more ambitious the mission, the greater the differences between conception and realisation. The program that'll get humans to Mars technically doesn't exist yet. A curious statement, given all the work that is being poured into it. But the final face of the program by which this feat will be accomplished will be an extension of every version and idea that had come along the way. It'll look quite different from what we have in mind now.

Both the institutional side of this necessitated caution as well as the prudence urgently needed to protect the missions that do get a go-ahead, as well as trying to enable more missions by seeing to it that the budget will be expanded – and for reasons that should actually bring Bill Maher on the sensible side as well, be reminded that the gross budget is being worked out as separately decided divisions, among which Earth Science is one, which includes the monitoring, understanding and combating the dangers our planet is facing – places NASA in the demand and compliance of a position of neutrality.
Neutrality is a thing to be maintained – until you can't.
The challenges of neutrality and integrity as an issue of the past, present and future, particularly where it concerns NASA, as well as related public relation matters, shall be discussed in later sections.
Before that we must turn to the, by now affiliated, master of bad PR.

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41 Recall: https://www.theguardian.com/us-news/article/2024/may/23/senate-democrats-immigration-border-bill

2. We Need to Talk About Elon

When the subject of SpaceX comes up – we're back in the city and larger town realm where most people live – and, just counting the recent couple of years, that'd be the same with *everyone* I spoke to, what I'll see immediately when mentioning the name 'SpaceX' is a face dropping. The company still has its share of fans outside the professional space community, fans as part of the wider community, but we're basically once again talking the auditorium scenario. As far as the general public is concerned, the company that enabled the United States and NASA, and with them a number of other nations, to carry astronauts to and back from the ISS and, as planned, elsewhere, the company that gave the world reusable rockets that return back to the ground as if someone is running the movie backwards, the company that relieved these space agencies from a continuation of dependency on the Russian Soyuz virtually in the nick of time, has landed itself on a shit list.
To varying degree, it must be said, and there are certainly those who don't give what such a list is made of, and still others who still care enough to look upon it in a certain awe that ends with the exclamation 'cool'. But unless the game of chance and statistics have played an uneven trick on me it's fair to say that the company is no longer exactly popular. We're talking Europe here, by the way.

In an age that could be given the name, among others, the Age of Conflation, the still appropriate response to that would be to clarify that SpaceX *isn't* Elon Musk, the latter being the reason for the dislike and the fatigue. SpaceX consists of highly talented engineers who're the true drive of the company's innovations, contrasting with the apparent public image of Elon Musk as being the last person on the launchpad with every launch, tightening a final screw or something, of Elon Musk as having single-handedly designed every rocket and capsule, to hand over the blueprints to his astonished minions who, gripped by awe and devotion, assure the master that they'll be getting on it right away.
This public may be at least understood in this instance, as the reason for why they're conflating the founder/CEO with the company itself is multi-pronged. For once it's an image that Musk himself cultivates, at least he does nothing to correct it. There's also a defty amount of others promoting the idea, as well as the figure of Musk as a genius, preoccupied with trying to solve humanity's greatest problems 24/7, Bob 'His Name is Robert Paulsen' comes to mind, repeating the rumours he's heard about Tyler Durden, '...he grew up in a mental institution and sleeps only two hours a night…'.[42] At least the green energy saviour-idea should have come to and end with Musk bonding with President Drill, Baby, Drill.
Finally, the public might not only be understood but outright excused, because as far as publicity is concerned, the representatives of SpaceX will not hesitate to further the image, too, and to an extent that makes one wonder, perhaps Elon Musk indeed *is* SpaceX after all. The loyalty seems unbroken. So much so that one may be forgiven the impression of a cult.[43]

I don't have insight into SpaceX' company policies. Last I checked a CEO should be fireable, as long as there's a board. Of course, knowing a little more about Mr. Musk now, having learned it along with the rest of the world, such old-fashioned clauses would pose no problem for him. Thus it's hard to say how much pressure and ultimate control play into this relationship. There had been

42 Fight Club, 1999, written by Jim Uhls, based on the novel by Chuck Palahniuk, directed by David Fincher

43 Admittedly, my impression here originates mainly from launches, and here the motivation in boundlessly praising Musk on behalf of SpaceX can be seen in the light of the desire to separate the celebratory occasion from the 'politics'. I say mainly, because if there are examples of critique of Musk voiced by SpaceX staff I still have to hear or read it, with the exception of former staff accusing SpaceX of creating a toxic work environment and instances of sexual misconduct, see →44

signs implying that not everything is rosy in the House of Musk, all of which have been quickly brushed aside by more representatives, and so swiftly, Musk barely had to comment himself.[44] With everything that has happened over the last couple of years, with the, seeming, evolution of Musk from the self-styled saviour of the world into a far-right wing enabler of Trump who knowingly spreads harmful falsehoods, there'd be cause to advice SpaceX the company that they not only *can* do without Elon Musk, but that they *would* do much better without him.

Dominant in the stock-taking that leads to this assessment is once again the PR factor, see 'dropping faces'. Of course, unlike NASA, SpaceX is a private company, not subject to the butterfly effect of public whims, the palpable extent of which may be experienced in Congress at budget decisions, which is a long way of saying they don't have to give a shit about your opinion. One is tempted to say that the rest of the world around this one company still has a say about what the company can do on and from the very same planetary surface, before catching oneself by recalling the rather boorish manner in which the Starlink satellites have been and still are being launched.[45]

Public figures can at times be seen talking about how people they've associated with have 'changed'. Tony Blair can in fact be witnessed saying this about Vladimir Putin quite a lot.[46] N-not in our view, say those who'd been watching Putin ever since he emerged on the stage of global consciousness, perhaps you've been a little too close up at times, dear Tony.
The same is often implied about Elon Musk. On the surface it may indeed seem so. We see what we think of as an evolution from the occasional shocking and very deliberate faux pas, spouted by a perceived bad boy with a juvenile mentality who wants to break things, to increasingly irresponsible remarks and messaging, to the propagator and creator of false information, to the supporter of an aspiring dictator and convicted criminal, betraying all claims for aiming at a better future, to an active ally of Nazi-affiliated far-right parties, -individuals and -organisations, and yeah, that looks like an evolution. Unless we have a better word for it.
One of the few commonplace wisdoms that remains valuable is the confession that we don't know other people. We know them *as* people, as members of the species increasingly unfittingly called *Homo sapiens*, and with that we know what a human being can be capable of, good and bad. We

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44 In a rare instance of open discontent several SpaceX employees drafted an open letter questioning policies within the company and criticizing Musk's Twitter habits and -conduct:
https://www.theverge.com/2022/6/16/23170228/spacex-elon-musk-internal-open-letter-behavior
Those employees were swiftly fired, and 'unsolicited surveys sent to employees during work hours' and pressure to sign them was cited:
https://www.axios.com/2022/06/17/spacex-fires-employees-criticized-musk
There have been complaints about sexual harassment, and about superiors ignoring allegations, allegations that involve Musk himself:
https://ghostarchive.org/archive/IdHf6
https://www.theverge.com/22831380/spacex-employees-harassment-workplace-misconduct-elon-musk
https://www.engadget.com/spacex-sexual-harassment-claims-204712046.html?guccounter
https://www.businessinsider.com/spacex-paid-250000-to-a-flight-attendant-who-accused-elon-musk-of-sexual-misconduct-2022-5

45 Early September, 2019 ESA's Aeolus Earth satellite nearly collided with one of the first batches of Starlink satellites:
https://www.esa.int/Space_Safety/ESA_spacecraft_dodges_large_constellation
Note that it was ESA who had to conduct the evading.
The by now much higher number of Starlink satellites, with many more still to be launched, also makes sky observation on behalf of other agencies and organisation increasingly harder:
https://www.bbc.com/news/articles/cy4dnr8zemgo

46 Many examples of Tony Blair talking of Putin as having changed can be found, here an interview with CNN's Fareed Zakaria:
https://www.youtube.com/watch?v=QNZ41bIxMbc

don’t know what specifically this can be with a respective individual until a situation is extreme enough to reveal it for us. There is nothing implicitly implying to me that Elon Musk has really changed at all, only that things have worked out for him, which is pretty emboldening in itself, as you can also see with Trump. In fact, the two aren’t so much opposites, as some commentators think to observe, they have quite a few traits in common. Hugely inflated ego, comes to mind. Seeing this ego being boosted. And also being remarkably thin-skinned, and vindictive.
The latter two attributes are a both extremely explosive and extremely common blend. Being vindictive comes hand in hand with being thin-skinned, the latter conditioning the former. And we’ve seen this with Musk early on. Tag ‘Pedo Gate’.[47] So little Elon wasn’t wanted. There he was, riding in as the saviour of the situation, and he was told, thanks, but no. It probably helped being super-rich when responding with a potentially reputation-damaging slur, so settling in the eventuality would not even cause an itch. And things like that would only further an extreme stance on freedom of speech turned use and excuse.

Everything we see with Elon Musk now was visible already much earlier, every craziness, every embellishment and exaggeration, every instance of rude behaviour, every time the bully shined through, every extreme view, and of course the vindictive diva. The acquisition of Twitter, soon after turned X, the image of bio-engineering an innocently chirping little bird to something rather ominous seeming has quickly turned out to be an adequate one, it’s hard to believe that it had *changed* the man. Revealed him in all his dubious glory, yes. Nothing new here. If shithead behaviour is being rewarded with success, the veil of appearance might as well be dropped.
It’s not an evolution. It simply is an escalation.

The only thing that has evolved is people’s consciousness about it. I myself am no exception. I remember Musk when he was still a sprat getting a million dollar car wrecked and finding it hilarious.[48] I remember thinking, what happened to him? What had happened between that moment and the days during which he decided to found an electric car company, aiming at replacing fossil fuel-run vehicles, a man who’d decided to use his great wealth to tackle planetary existential threats, a man who went on to found a private space agency packed with innovative engineers with adventurous mentalities – SpaceX had then seemed like the real world equivalence of the Hitchhiker’s Guide to the Galaxy headquarters with the piano hanging from the ceiling.[49] I wondered what and when the moment was that had flipped something in this young, careless man. There were a number of occasions on which it not only seemed but *was* right to defend some of his ambitious ideas and their executions. Musk rightly stated that if we want to survive as a species we have to become a space-faring one. He’s not the only one saying this, and I could write a book about why he’s right about it, so no particular need to specifically quote him outside the context of this piece. When certain columnists started complaining about the apparent gimmick of rocketing a Tesla into space, in their view adding to the already dangerous amount of space trash, they needed reminding that they clearly didn’t have all the facts at hand: the launch had been a virgin flight.[50] Testing a rocket that’s meant as a space delivery system for payloads and eventually humans only makes sense if you load it with an equivalent weight (unless you want two launches, twice the price and risk). Even minor weight addition, such like a hair comb, will have to be factored into a rocket launch. You won’t load a rocket about to be launched for the very first time with an actual satellite,

47 https://www.theguardian.com/technology/2018/jul/15/elon-musk-british-diver-thai-cave-rescue-pedo-twitter

48 https://www.youtube.com/watch?v=mOI8GWoMF4M

49 Douglas Adams, The Hitchhiker's Guide to the Galaxy, 1979, Pan Books, ISBN 0-330-25864-8 and follow-up novels

50 I’m particularly referring to Kevin McKenna’s piece in the Guardian: https://www.theguardian.com/commentisfree/2018/feb/11/weve-trashed-oceans-now-turning-space-into-junkyard-for-billionaires-elon-musk-tesla

which is precious, expensive and so not serial-produced. NASA traditionally uses a slab of concrete. Musk and SpaceX thought a Tesla would be less boring, and it was his, after all. The Tesla, complete with astronaut dummy and camera, also wasn't meant to stay in orbit, thus wouldn't add to the ever increasing problem of space junk shelling around our planet, it was meant to go on a Mars trajectory, and whatever you may think about a Mars program, sending something ahead to etch out a few of the many problems is only sensible. Thus SpaceX killed three flies with one swat: successfully launching a new vehicle, using the less boring Tesla- and camera alternative for publicity purposes by means of gorgeous and somewhat surreal imagery, and putting something on track to Mars. No waste.

For an all too long time I excused what I came to call the 'Oh, Elon-moments' as the excess quirks of an eccentric individual who has, overall, the right plan. As a space enthusiast I was perhaps primed to be blinded. Always look at the individual. Really look at them.
My own evolution, following this escalation, unfolded like this:
'Geez, another Oh Elon-moment.'
'Ah. So he *is* just another rich bastard with an ego-problem, after all.'
'This guy is not the answer to our problems, he's a threat, and we'd do better without him.'
Stage 2 came about with a little realisation that was quite astonishing in its simplicity, and it culminated watching him trying to get involved with virtually everything (a tendency that has found a new vent in the present with Musk meddling in the affairs of other countries, and with undisguised malice), and it went like this:
Elon Musk wants to become the greatest person in human history.
If that sentence sounds childish, it's because it is. And it totally applied. Anyone concerned yet?

Once again I'm not alone, others have gone through the same painful process, but the timing wasn't, and isn't, always the same. I haven't followed the story too closely at this point, but the recent little spat between Musk and Neil deGrasse Tyson might mark the beginning of Dr. Tyson's disillusion with the man.[51] Or perhaps it had already progressed, and the rather mild critique only signifies the first public twitching on behalf of Dr. Tyson. Not too long ago he had waved Musk smoking a joint off, 'leave the man alone, he's the best thing we've had since Thomas Edison', at a time when other, more concerning issues than marijuana consumption were already becoming visible.[52]
From all that seems, though, the so-called feud that's become more of a feud on Musk's side, had been more of a creation of the media that had involved itself, with Dr. Tyson's comments not being unreasonable and not appearing to be designed to spark a fight. But, as said, the other side is a papyrus-skin diva.

Which leads us to the subject of myth.
As already stated, one shouldn't conflate Egon Musk with the companies he's founded and which he's heading, unless the employees of the respective companies give you reason, and in unison. But the image has been carefully cultivated. Elon the genius.[53]

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51 Dr. Tyson's views are summoned up in this monologue on his show Star Talk:
https://www.youtube.com/watch?v=3Jgev_YGl44
His arguments are mostly sound.
More about the spat here; I'm not familiar with ndtv, this to be kept in mind:
https://www.ndtv.com/world-news/elon-musk-neil-degrasse-tyson-clash-again-over-mars-colonisation-it-doesnt-happen-7092491

52 https://www.youtube.com/watch?v=n6XsBj7qDlA
Needless to mention, I strongly disagree with the Edison-comparison.

53 Besides the term in my view not applying to Mr. Musk, here might be a good place to also vent my annoyance with people continuing to call him by his given name, including those who won't be on a first name-basis with him. Try and imagine talking about the current U.S. president and referring to him as 'Donald'. You may be able to think of

Commonly the term is all too carelessly applied with much too much ease. No, Kanye West is *not* a genius. Bach, Martinů, Coltrane and Takemitsu were, when it comes to music. We throw around this valuable word with the same irresponsible lack of caution by which we fling the equally precious word ‘love’.
It’s more serious in Musk’s case because we’re wanted to really believe in it. It’s not carelessness, there is a purpose in maintaining the myth. Hence there could be no greater necessity to subject it to revision.
An easy example, if yet somewhat opaque where intent is concerned. I’m still not entirely sure just how serious Mr. Musk was when proposing the detonation of nuclear weapons above the Martian poles in order to melt them, and to then use the water for irrigation purposes on the path to terraform Mars into a habitable planet whilst also, so his idea, warming the planet with the released greenhouse gases.[54]
It’s not working as a joke, and, what’s infinitely more important, it’s not working should it be seriously meant as a plan. It’s not working because it violates the reality of basic Mars facts. Keep in mind, we’re talking a man who wants to head a crewed Mars mission.
There are a few technicalities we might want to get out of the way first, such as the nuking of an unexplored region of another planet, one where we do indeed see frozen water reservoirs near and even on the surface, which is not exactly common on the sub-freezing, dry desert surface of most of the rest of the planet. Among the numerous undiscovered secrets potentially embedded there might indeed be the presence of life, because of this water.
Martian ice, not all of it is frozen water, not even at the poles. The Martian polar caps also consist partly of frozen carbon dioxide and carbon monoxide. Importantly not water. On Mars carbon dioxide won’t melt and liquefy when heated, it’ll undergo sublimation, turning from a solid straight to a gaseous state, just like carbon monoxide will, including here on Earth (remember dry ice?). Even if it would become a liquid, it isn’t water.
But if we concentrate on the water – so you want to nuke the ice, have it melt, and then irrigate with it? Bon appetite. If you’re into irradiated crops.
Speaking of radiation. Lots of funding needed to shelter the pipes or canals through which the – already irradiated – water is supposed to go, because the whole planet is subjected to the solar wind 24, 39/7[55]. Highly charged particles bombarding its surface perpetually, sterilizing everything on its surface, including anything you might try to grow, except you won’t get that far. You can construct specially shielded greenhouses. But covering the planet in those things isn’t terraforming it.
Why is Mars perpetually bombarded by those highly charged particles? Because of Mars’ basic problem where habitability is concerned. The planet has lost most of its magnetosphere, its magnetic protection, without which this deadly and constant flow of radiation hits the surface unimpeded. And not only that, the atmosphere cannot withstand this onslaught either. Mars’ atmosphere is composed to 95% of carbon dioxide, a potent greenhouse driver (Earth’s atmosphere only needs 0.04% to keep us warm and snug), but because the atmosphere is being degraded, is being flayed off the planet, it is by now so thin (1% of Earth’s atmosphere’s density) that it can no longer retain any warmth. The reason why it is so cold on Mars. It’s also the reason why everything would return to this state, once the heat of the nuclear explosion has ceased.

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other examples.

54 I’ll only link to this space.com article, if you want to waste your time searching for more, feel free: https://www.space.com/elon-musk-nuke-mars-terraforming.html
The item misses the most important arguments for why this idea is bonkers.

55 A Martian day (sol) lasts approximately 37 minutes longer than an Earth day.

Any water exposed to the Martian environment will therefore instantly freeze. There's no way of terraforming Mars without first kickstarting the planet's core to generate a decent magnetic field.[56] If Mr. Musk has any bright ideas as to how to accomplish that, pray, let us know.

You might now think that someone leading a crewed Mars program meant to carry dozens of astronauts to this harsh little planet (up to a hundred, in fact) ought to know about this.[57] And I concur. Not knowing about these basic Mars facts would be disqualifying.
Which leaves us with three possible explanations, again, should Musk indeed be serious about nuking the Martian poles.

- Mr. Musk is indeed ignorant about these inescapable facts, and no one at the highly qualified engineer-studded SpaceX has so far dared to explain them to him, both possibilities in themselves reasons to be somewhat concerned.

- Mr. Musk has been told by one of the highly qualified SpaceX engineers or someone else, but elects to ignore these facts, as they're standing in the way of his glorious planet conquering, and I don't have to explain why *that* should worry you.

- Mr. Musk has always been fully aware of these facts, and has thus always known that both the polar-nuking and the terraforming are nonsense ideas, the latter at least until the problem of magnetic protection is solved, and he only keeps up the performance to get the public behind him for his ambitious Mars mission.
  Which alone would make him a liar and a fraud.

I'll leave it to you to decide which of these you think might be the most convincing answer.

One more thing in regards to Musk and Mars, and this might be pure conjecture.
Until the process of rude awakening had been complete, my impression of Musk's Mars plans was that it is closely and naturally linked to his view that we need to become a space-faring species in order to survive in the long term, a view which I, as stated, share. This indeed requires the move to create outposts in our solar system as a first of the larger next steps. It's a very, very long way to become such a species, and the earlier you begin, the better.
There is yet another possible context in which to perhaps view his Mars ambitions.

The realisation that things might not turn out well, that we won't make it, can have a massive impact on a person. Ask me. Public speakers more commonly try and emphasize hope, optimism. The things we can still do. I don't have a problem with that, just as long as we're then doing them. Which presently isn't the case at all. And it's gotten to the point where I get nauseous when exposed to still more optimism. Pessimism isn't the same as resignation. Granted, it can very easily lead to resignation, to paralysis, but it isn't the same. You can be a pessimist and still fight to preserve the thing you think is likely doomed.
Part of that is admitting that things may turn out worst, that a happy ending is not written into the script because we're not living in a Hollywood romantic fucking comedy. I guarantee you, it's not the easier approach.

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56 Should Mr. Musk or anyone else be interested in learning more about basic Mars facts, especially its magnetosphere, here are some places to start with:
https://www.esa.int/esearch?q=mars+magnetosphere
https://en.wikipedia.org/wiki/Magnetosphere#
https://science.nasa.gov/mars/

57 https://en.wikipedia.org/wiki/SpaceX_Starship

Until a number of years ago I thought this to be the driver in Musk's approach. To try what he could, but at the same time acknowledge that it might not work, that it won't be enough in time. And that we must indeed have a plan B – anyone complaining that we need to fix our own, the only liveable planet we have, not looking for a plan B, must be given this answer, plus the question when in our history a plan B had ever been a bad idea.
It still might factor into Musk's space ambitions, somewhere.

For quite a while now some of the super-rich among us, well, hardly *among* us, have been planning their own exit strategies for the eventuality of a world-ending catastrophe. Thermonuclear world war, environmental collapse, asteroid impact, what have you. Planning, and indeed building. I recommend Douglas Rushkoff's book 'Survival of the Richest', already published in 2022.[58] More recently in 2023 WIRED published an exposé about Facebook's founder and CEO Mark Zuckerberg building a private compound in Hawaii, complete with massive and presumably luxurious fall-out shelter.[59] Quite a few of these projects start with the even more remote New Zealand as a preference, however.[60]
It would appear that those tech giants have arrived at the conclusion that the reason for why they're so successful, why they've become so obscenely rich while the rest of us are sliding down the drain, is because they're this much smarter than we are, and hence this much more valuable and important. The right breed to have the presence of our species to continue. Rushkoff mentions one case where the plan for a survival compound includes a moat, filled with flammable liquid, in case the ragged Armageddon-surviving sods from outside try to come in.
Just quickly, and out of habit, about the smarts. Two of my favourite movie lines: 'Forget the myths the media has created about the White House, the truth is, those guys aren't very bright.' The character of Deep Throat from 'All the President's Men'.[61] And 'Speak as you might to a young child, or a golden retriever. It wasn't brains that got me here, I can assure you of that.' The character of John Tuld, 'Margin Call'.[62]

Does the richest man on the planet have no such plans? Or could it perhaps be that Musk's end of the world-retreat is another planet? As hostile as Mars looks to us now, it wouldn't compare much worse with, say, our world as left after a thermonuclear world war. Radioactivity? Yes, here on Earth, too. Scant supply if any of edible food and drinkable water? Check. You bring it to Mars or produce it there, you only need to protect it, and you'll have more of it than we'd have here. Unbreathable atmosphere? Check, you destroy life on Earth, it'll consequentially change the atmosphere. On Mars creating spaces and bringing suits to provide you with breathable air are mandatory, unlike us poor survivor schmucks here on Earth, you'll have the equipment for that. The need to have a good shelter with enough supplies, the problem of a degraded ozone layer, the consequence of which would be anyone using sunlight to see with to be blinded? That might in fact be still better on Mars.
Verdict: if you manage to build good habitats on Mars and find a way to grow edibles in well-protected greenhouses, Mars can indeed seem as the better option, compared to an Earth wrecked

58 Douglas Rushkoff,'Survival of the Richest', 2022, Scribe, ISBN 978-0-393-88106-6

59 https://www.wired.com/story/mark-zuckerberg-inside-hawaii-compound/

60 As an example, Peter Thiel, here The Guardian's longform audio of an article by Mark O'Connell, a link to the text version is included: https://www.theguardian.com/news/audio/2024/oct/30/10-years-of-the-long-read-why-silicon-valley-billionaires-are-prepping-for-the-apocalypse-in-new-zealand-2018-podcast

61 All the President's Men, 1967, written by William Goldman, based on the book by Carl Bernstein & Bob Woodward, directed by Alan J. Pakula; Deep Throat is played by Hal Holbrook

62 Margin Call, 2011, written & directed by J.C. Chandor; John Tuld is played by Jeremy Irons

and ravaged by thermonuclear weapons. Also, the rather depressing sights of reality will be far, far away.

Again, pure conjecture. But it begs the question. Has Elon Musk perhaps already given up on Earth?
It would explain some of his behaviour, such as the apparent turning away from a sustainable energy program in favour of supporting fossil fuel-loving Trump. It will not serve to excuse it. Especially not since his choices are now actively driving the dangers. All of them.

More likely still, Mr. Musk's aims and gains are of a more wordly and terrestrial nature. We've arranged it so that a person can go from the richest person on Earth to – does anyone even still know, is it double that by now – by doing nothing except for cultivating a close association with the incoming and then inaugurated President of the United States.[63] According to the Washington Post Musk had a squishy $200 billion added to his wealth last year alone, $70 billion of which, according to CNBC, rolled in since Trump's election.[64] Tesla stock rising, and we must also count with virtual currency.
Of course the earthly and the celestial don't cancel each other out. Any mission to Mars will be the most expensive travel arrangement in the history of humanity. It's just that until then there are plenty of ways to feel comfortable at home, including pastimes like throwing wrenches into the already unstable gears of a fragile, brittle and fragmented world order, if we can still call it that, and boy, does the man seem to have fun. From Ukraine to the UK, from Germany to Italy, Musk is eager to have a loud say, rubbing shoulders with and dealing out endorsements to right wing leaders as well as insults, smears and unfounded allegations to centre- and leftish figures and parties.[65] Seems like dear old Elon's ambitions have moved on from wanting to be the greatest guy on Earth to being the greatest wrecking ball *to* Earth.

The apparent arrogance by which all this is done fits the profile of the super-rich who's convinced that he's reached the top by the sole merit of his brilliant mind and is therefore better suited to make decisions of consequence for the world than anyone belonging to the sucker realm. But how much of a genius is he really?
Musk stems from a wealthy family, attended a private school after he was beaten up in the previous one, and after that the University of Pretoria for five months. He applied for a Canadian passport (his mother was born in Canada) to avoid being drafted into South Africa's military service, no critique here, he would have otherwise served the apartheid regime, as well as to prepare his entry into the United States. One year after his arrival in Canada he spent two years studying at the

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63 https://www.bloomberg.com/news/articles/2024-12-11/elon-musk-net-worth-tops-400-billion-a-historic-first

64 https://www.washingtonpost.com/business/2024/12/15/elon-musk-trump-election-wealth/
https://www.cnbc.com/2024/11/11/elon-musk-is-70-billion-richer-since-trump-victory-due-to-tesla-surge.html

65 https://www.npr.org/2022/10/04/1126714896/elon-musk-ukraine-peace-plan-zelenskyy
https://www.bbc.com/news/business-63126550 cont. next page
cont. 65
https://www.aljazeera.com/news/2022/10/4/elon-musk-draws-rebuke-from-ukraine-after-tweeting-peace-plan

https://www.theguardian.com/politics/2025/jan/06/why-is-elon-musk-attacking-keir-starmer-over-grooming-scandal
https://www.theguardian.com/commentisfree/picture/2025/jan/27/ben-jennings-on-keir-starmer-elon-musk-and-donald-trump-cartoon

https://edition.cnn.com/2025/01/09/world/musk-livestream-afd-weidel-germany-intl/index.html
https://www.bbc.com/news/articles/cr7errxp5jmo

https://www.washingtonpost.com/world/2025/01/11/elon-musk-giorgia-meloni-italy-spacex/

Queen's University, Kingston, Ontario, before immigrating to the U.S. to study for three years at the University of Pennsylvania, graduating with a Bachelor of Arts in physics and a Bachelor of Science in economics in 1995, in his own words, though there's some befuddlement here, since the University didn't award these degrees before 1997. In addition to this academic career he was accepted to enrol in a graduate program in materials science at Stanford University, California, in 1995, but did not attend.[66]
This alone does not make the engineer of the kind of standing so many people like to see in him. But credentials in themselves must not be the bar by which to judge talent, either way. Safe to say, in any case, that Musk's real interest lay with new media and gaming. And business.

Being a business man first by all accounts, the internet's momentum provided the platforms for him to make a name as such. X.com led to PayPal, of which he briefly became the CEO before he was replaced by Peter Thiel.[67]
SpaceX was founded in 2002 by Musk, of which he became the CEO and chief engineer – to which degree the latter is more title than job description I'll leave to others – after travelling to Moscow twice as part of a group of entrepreneurs and engineers to see if decommissioned ICBMs could be purchased in order to be repurposed as space delivery systems, both times the deal falling through.[68] SpaceX was meant to build more affordable rockets, the most sensible way being to make them reusable.

Tesla, meanwhile, wasn't Musk's brainchild. He joined the existing company's board of directors in 2004 after being an investor and shareholder. After internal conflicts Tesla co-founder Martin Eberhard was ousted, and Musk became the boss in 2008. Job titles: CEO and product architect. Interestingly, notably, fascinatingly, a lawsuit filed by Eberhard in 2009 was settled out of court, from which Musk mysteriously emerged as co-founder of the company.[69]

For any of the side-gigs, knock yourself out. The same would in principle go for Musk's acquisition of Twitter, soon to be turned into X, if it weren't for the consequences. I'm still not decided at this point whether the purchase constituted a bungle turned dark opportunity, or if it had perhaps been intended for the sinister purpose we see and experience now from the start.[70]

Either way, looking at Musk's business career, and it's hard to avoid the impression that once again the clichés there are about this particular world very much seem like reality. An impression that the phenomenon Elon Musk has less to do with gifted engineering qualifications and more with hard business practices, impressions, make-believe and, at times, and with time ever more often, bullying. With power ambitions. And of course with money.
Concerning the power ambitions, Musk is where he wanted to be, and possibly on the path where he wants to be next. Congratulations, dear planet. Let's see what's next.

It was necessary to have a closer look at Mr. Musk to gain a little perspective at the new dilemma at least NASA finds itself with that had helped it to more or less avoid the gross of the Russia dilemma. PR problems are only the beginning here, but they're important. We're back with the

66 https://en.wikipedia.org/wiki/Elon_Musk#Early_life_and_education

67 https://en.wikipedia.org/wiki/Elon_Musk#X.com_and_PayPal
https://web.archive.org/web/20170523114437/http://fortune.com/2007/11/13/paypal-mafia/

68 https://www.bloomberg.com/graphics/2015-elon-musk-spacex/

69 https://www.cnet.com/culture/tesla-motors-founders-now-there-are-five/
https://www.fastcompany.com/1367866/tesla-lawsuit-drama-ends-five-company-founders-emerge

70 https://en.wikipedia.org/wiki/Acquisition_of_Twitter_by_Elon_Musk

long, dropping faces. Because just as SpaceX is immediately not merely associated but identified with Elon Musk, you may watch more and more faces dropping when mentioning NASA at this point, as now NASA is being closely associated with SpaceX, and thus Musk, for the simple reason that they are.

They are by the doubtful virtue of having escaped one reliance, the Russian Soyuz, only to land themselves in another, SpaceX and thin-skinned and vindictive Elon Musk. And quite inescapably so, even if Starliner will eventually, finally become a fully reliable alternative vehicle.[71] NASA is a government agency, the funding of which depends on congressional approval, on the government, to which Musk is now also linked. In fact, he has his own department. The totally newly created Department of Government Efficiency. A great position for the CEO of multiple companies, a great position towards which other establishments will look, other government agencies. A great position from where to hold a certain sway.

Latest from there? The department was meant to be headed by Musk and Vivek Ramaswamy.[72] At the time of writing this Trump has been back in office for a few mere days, meaning that this department has existed for only this long. And Ramaswamy is already out.[73] Meaning it's now solely run by Musk.

We'll have to wait and see what all this will mean for NASA, for any space agency that wants to use anything else than a Soyuz to get anything or -one into space. That said, some of this already emerges, as we'll see later. To make any sensible projection, however, to assess what's more likely, what means NASA has, and what limits, we have to look at the agency's track record in this regard. Not only at the successes, and not only at the many good examples NASA has provided.
We have to have a look at NASA's sins.

3. Unfinished Business: NASA's Past and Present Sins

The urgent need for caution, to protect extremely valuable, expensive, long laboured over and promising missions and programs, active and future ones, as well as the limits and restrictions any governmental agency is subject to, factors into every point made here and must be respected with every question that may and will emerge about the ethics and responsibilities extending beyond the borders of agency protection, limits and mandates.
That said, it is not only a matter of the past when agencies of any kind may be tempted or feel coerced into using the law of the land- or mentality of the time- or, to use a term we'll immediately understand as portentous in a particular way, following orders-excuse. In respect to our current political reality I'll later propose a, by its nature unavoidably hard and unsatisfying, way out of this apparent trap.
Safe to say, being historically conscious is an indispensable part of the foundation of any society yearning to become a civilisation, and the reluctance toward or even rejection of such consciousness is antithetical to the ambition. Historical memory must include naval-gazing, must include the deliberate exposure to a reckoning, exclude this, and it'll be the wrong kind of damage control, it'll

71 https://en.wikipedia.org/wiki/Boeing_Starliner

72 Ramaswamy in:
https://www.bbc.com/news/articles/c23vkd57471o

73 Ramaswamy out:
https://www.theguardian.com/us-news/2025/jan/21/vivek-ramaswamy-quits-doge-elon-musk

be smoothing surfaces, denial and evasion. Being upfront, being honest and preemptively open about failures and mistakes on the other hand is what'll generate trust. And where the mentality of a period is concerned, it won't be enough to read the room, you better read the whole building under construction, especially if you're an agency of progress and innovation – you're supposed to be the court that helps shaping the laws to come. When people say, 'the future is now', you may answer with, 'and so is the past.' The future past. And we will be judged.

Unfortunately NASA has been far from perfect in this regard, and it still isn't where it's supposed to be, which is cause for worry, looking down the barrel of this second Trump term.
If you, like me, are a frequent visitor of NASA's website, you will have seen that effort was being made over the past few years and decades where it comes to inclusion, in fact so much one may call it exemplary, for as that it was intended. If I'd be discussing this with a NASA representative they'd certainly point at these examples and asking me what I want. That is, current times have caught up, and the imaginary rep might have a much tougher time right this moment.

When searching the net with the words 'NASA reaction to Trump DEI executive order' I'm struck by how almost the entire first page features outlets I'm not familiar with. NASA is still very popular, at least within the media. Apart from one outlet I won't read, I have to scroll all the way down to find an item by spacenews.com, about which I'm also cautious. On page 2 results for my inquiry already become less specific to what I was asking and include the Trump White House's 'Ending Radical and Wasteful Government DEI Programs…'[74] From there it's mostly items about the numerous executive orders as such.
The items I do find unanimously state that NASA is shutting those programs down. Which shouldn't surprise, again, it's a government agency, and an executive order obliges them. What I do find surprising is that there appears to be nothing or at least too little in the older and more established outlets that I still consider more trustworthy. Not even in The Guardian (that, I should add, might have to do with the Guardian's less than satisfying search engine, but then, it uses Google; even so, the item, if existing, should be easy to find without using the search option). What I find also a little surprising, and more than a bit disappointing, is that I don't find anything about it on NASA's website either.
Here, too, I resorted to use the NASA-internal search engine. The closest match I got was an older, though undated link to an item titled 'Inclusion Plan Resources – NASA Science, the Review of ATP Plans by DEI Expert and Science Expert Panels', I say older because clicking on it it'll bring you good old 404: 'The cosmic object you were looking for has disappeared beyond the event horizon.'[75]
Come on, NASA. Friend? Just a statement. A simple statement, you should be allowed that, a simple statement as to you having followed the order won't endanger Dragonfly.[76]
Perhaps NASA's search engine isn't that good either, perhaps I just haven't found anything yet. I'll keep looking. And waiting.
Acting Administrator Janet Petro's statement has gone out. I assume on social media outlets such as Facebook and X, which I don't use. It's fair to say, though, that NASA is being mentioned as an Among on the list where the topic is an item in the broader news landscape. If the statement is to be found on NASA's website, it's pretty buried and hush-hush.

Being a government agency must be a bitch at times. I don't think for a moment that there's any majority among the people working for NASA, or among their affiliates, with the safe exception of

74 https://www.whitehouse.gov/presidential-actions/2025/01/ending-radical-and-wasteful-government-dei-programs-and-preferencing/

75 https://science.nasa.gov/researchers/inclusion/

76 https://science.nasa.gov/mission/dragonfly/

the top of SpaceX, who're in support of this order. And if there's a minority, it'll be a very small one. Things at least seem to be different at the helm, though.

Since Bill Nelson retired from the job as NASA Administrator Janet Petro, who'd hitherto been Deputy Director, has taken over as acting Administrator, and she appears to be fully onboard with the Trump administration's agenda regarding DEI.[77] 'These programs divided Americans by race, wasted taxpayer dollars, and resulted in shameful discrimination,' she is quoted by spacenews.com. The article goes on: 'The memo also requires agencies to provide lists of their DEIA offices and employees, as well as related contracts, by Jan. 23, and submit plans for laying off DEIA employees by the end of the month,' and relates that searching NASA's Office of Diversity and Equal Opportunity returned a 404 result.[78]
Right. Should've tried that one.
Wikipedia's full entry about her new job reads:
'As director of NASA, she eliminated the Diversity and Inclusion office, in compliance with an executive order by Donald Trump. She requested that employees report their colleagues for changing contract descriptions and threatened "adverse consequences" for employees who did not "report" violations.'[79]

Which is arguably the most rancid of the appendixes dangling from the dirty belly of this thing. Not only will there be retributions for violations, not snitching on those will be a violation itself. Not snitching will be an offence. You are ***obliged to snitch***.

We have been here before.

There is only one type of society where such a thing is being decreed from the top down, where such a threat is apparently seen as necessary to be included (you won't find it as an addition with any other change of policy, not even with written prohibitions, and not even with crimes in the eye of the law), and only one type of society where it is speedily and readily and eagerly accepted, followed and made part of the new status quo without even as much as a comment.
Given that this seems to be the case with the institutions affected, and given that this really important detail isn't widely discussed on the panels and in the papers (I might have missed it, but then I'd be still missing it), I'm afraid the United States are no longer merely facing the prospect of tyranny, they have already arrived at it. They just haven't noticed yet.

The incitement to report, let alone the obligation with the threat of penalty should one fail to report, that's from the dictatorship's play book. It's a totalitarian tool, the purpose of which is always the same, to create fear, to create paranoia, to set people against each other, colleagues against colleagues, and to make thus sure they'll all be good puppies. Keep in mind that we're talking about the abolishment of a *program* here. Not something that is by any understanding a *crime*. What do you think will happen in regards to anything that may be declared a crime? If you're uncertain ask anyone in whose country lèse-majesté is still a crime in the book of law, for which the accused offenders may find themselves jailed for decades, if they're not executed.[80]
I cannot for the life of me understand how this addition, this threat, this command to report, isn't being discussed more.

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77 https://www.nasa.gov/people/janet-e-petro/

78 https://spacenews.com/nasa-shutters-diversity-offices-to-comply-with-executive-order/

79 https://en.wikipedia.org/wiki/Janet_Petro#NASA_director

80 https://en.wikipedia.org/wiki/L%C3%A8se-majest%C3%A9#Current_laws

NASA. What will you do?
ESA. What will *you* do?

There were problems before Trump and Petro. Problems with a true reconciliation regarding dark spots in the past. NASA's page for Wernher von Braun thankfully does not omit the deep guilt of the man in relation to what went on at Mittelbau-Dora and his membership in the SS.[81] But when it comes to past discrimination on the bases of sex, skin colour or sexual orientation you'll really have to look hard – if there are pages dedicated to openly dealing with these aspects I apologize, and refer to the need for a better search engine. Very easy to find are pages like 'Celebrate the Role of Women in NASA History', featuring a few examples of women who have advanced our species while in the service of the agency, which, in extension, also celebrates the agency employing them.[82] Up until now, and hopefully in the future, NASA's website frequently features snippets about single employees and their roles in the agency, with an emphasis on people with ethnic and cultural backgrounds other than piggy-pink flesh-coloured folks. Which is good. It would be a good little door out from the imposed anti-inclusion stance if continued. But already before this imposition, it's not enough to demonstrate how well you're doing now if you keep the record about the past omitted.

You may say, look, who'd ever put themselves on the map as having had a dark past? Who'd ever do that?
The Guardian, for instance. The Guardian offers a free listen to its 6-episode podcast 'Cotton Capital', in which its connection with slavery is being dealt with.[83] And it's easy to find.

Which is how it should be done. There is failure, there is a rotten patch in your past or present, come out about it, be open, be honest, invite comment. That's how you'll establish trust. NASA's page on Wernher von Braun does that. Elsewhere on their site it's a little more downplay, and a little more up-play about how good the agency is doing now.
Correction. How good it's been doing *until* now.

It is possible that acting Administrator Petro is acting in good faith when stressing the particularly odorous call for reporting personnel who violate the order, this call being probably included where ever the executive order is meant to apply. It is possible that her foremost concern is to protect the agency. I would like to see her seemingly eager compliance in the same light as my tentative free reading of Bridenstine's odd final praise. I must not simply make it an assumption, though.
And the question is the same for Petro. During his first stint at the presidency Trump made bombastic announcements regarding sending humans to Mars, while attempting to slash NASA's Earth Science division to an egregious degree, aiming to put blinders on the very ability of assessing the effects of human greenhouse gases on our planet's atmosphere and climate.[84] The slashes were not approved in Congress, even though both chambers had at that time been in Republican control, but that was before the so-called GOP had moved onto the wacko ward.
Now we're dealing with a Republican party that is fully behind Herr Trump to a degree that only resembles a cult. I don't think President Drill, Baby, Drill has changed his sentiments in regards to Earth Science. We might have to prepare for some slashing, and this time for real.
What will you do then, Administrator Petro?

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81 https://www.nasa.gov/people/wernher-von-braun/

82 https://www.nasa.gov/centers-and-facilities/stennis/celebrate-the-role-of-women-in-nasa-history/

83 https://www.theguardian.com/news/series/cotton-capital-podcast

84 https://www.planetary.org/articles/20170306-trumps-first-nasa-budget
You'll see that Trump also wanted NASA's office of education to be eliminated.

NASA rightfully presents itself as an important part of the international community tackling this absolute priority. If it no longer is, and is being meant in substantial terms, satellite observation, on ground- and aviated measurements, what do you expect the rest of us to think of you? Of NASA on the whole? How much public support for the exploration of other worlds do you think you'll retain if you'll dunk the exploration of one planet's dire problems into a sinkhole? On order.

It is possible that the apparent quiet on NASA's website is meant to avoid the wrong attention. We said it, let's move on, and let's not have it stand on our website. Will you blame the masses for thinking of this as a little dubious? Silence doesn't explain, not in this case. Must I remind of the dropping faces again?

With NASA's presentation of itself in regards of inclusivity until this moment, mostly amounting to 'see, we're doing it, we are inclusive, aren't we inclusive?', without providing a detailed and easy accessible place to educate about the times when it wasn't this inclusive – let's not forget, humanity doesn't like to do the homework itself, past lessons are soon forgotten, including by the new generations, except that many of them don't learn them in the first place – it's now in danger of having to decide against integrity in favour of safety, and it'll seep through to its affiliates as well. ESA is dependent on NASA for orbital access where it includes humans, at least for now. NASA is dependent on SpaceX and, by extension, Elon Musk. Thus ESA's crew programs are dependent on SpaceX and Musk. The new policies awaiting NASA, they might easily affect ESA. It's hard to see how they won't.

It is the bitter reality that each agency, space- and otherwise, now has to deal with a second Trump era, and that can't be done by them fighting him openly. It'll include trying to placate him, to make him believe you're on his side. And you might want to make the first step.
The Planetary Society's space policy guru Casey Dreier has written, published and sent 'Space Recommendations for the Second Trump Administration.'[85] One is tempted to say, 'welcome back to that', as I think to remember him having authored such recommendations the first time Trump was around, and I can't recall him penning some for President Obama. No need for explanations, here.
But it's not like the first time. This letter, this approach, is far more important this time. And might be totally ineffective, but it's a try. All said, we've arrived in a period where the able Mr. Dreier might want to consider typing out 'General Recommendations for Surviving the Second Trump Administration' and address them to NASA.

4. Misaligned Priorities: NASA and Affiliates under Trump and the Choices at Hand

The obligation to snitch in the onslaught against the letters that combine the for the Trump administration clearly adverse and threatening ambitions diversity, equity and inclusion, to my mind exemplifies what's to come loudly and clearly, and it deserves more attention in media coverage than it gets.
In this coverage by the serious U.S. outlets, at least the banner of the free press is still being carried forth, though I believe no one carrying it suffers from the illusion that this can't change at any point, keeping in mind that this president has repeatedly declared this free press the 'enemy of the people'. Until this banner may be taken down with force, however, one specific term is repeatedly being employed with confidence that ought to be interpreted more as an expression of hope, when talking about this second Trump term anchors, reporters and pundits like to speak of it as 'the coming four

85 https://www.planetary.org/articles/space-policy-recommendations-for-the-second-trump-administration

years', and this continues a tendency that established itself, as if naturally, during the interim between election and inauguration, namely one of desperately contrived normalcy. It was understandable during this interim period, as at least officially Mr. Trump wasn't yet in power.

The staff at, for instance, MSNBC and CNN, hold up bravely and with strength. Latest since Trump's probing into abolishing citizen birthright has begun, however ('probing' because I believe even he had been aware that this one would draw immediately backlash from at least some of the courts), even the most optimistic among those citizens must have come to understand that Trump very much eyes to disregard and change the U.S. constitution where it may suit him, including the 1st Amendment that ensures a free press. A free press is a thorn bush in the eye sockets of every dictator, and it's always among the first to be attacked, then restricted, then effectively abolished, to be replaced by a designated state organ, in the case of the U.S. already existing, both openly and waiting in the wings.

It must not be overlooked, and this follows the blueprint as well, that it's not Trump alone. Mr. Trump is 78 years old and is not living a healthy life, and he will eventually die. What has come about with him won't so easily. The party that shall no longer be called the Republican party to avoid Lincoln's ghost committing suicide in death by rapid spinning, it has set itself up to stay. Neither Trump or this party have any intentions of leaving the stage, and if your reply to this are words like 'voting', 'midterms' and '2028' you haven't paid attention.
The hopeful 'next four years' are not a given. Their limitation must be fought for hard. Otherwise we'll have all the planet's superpowers, bracing it like a rusty, tetanus-ridden belt, Russia, China, you may soon count in India, and now the United States of America, plus their already openly fascist-leaning friends, deciding its fate as autocratic, dictatorial states for good. For who will have the means to oppose *that* axis of evil, other than what might result from eventual grievances among *them*, and angels and ministers of grace defend us then.

Since the writing of the previous section and now, what has happened?
A recent phone call between Trump and the Danish Prime Minister Mette Frederiksen has been revealed, in which Trump apparently angrily *demanded* that Greenland be sold to the U.S., leaving both Denmark and the independently governed Greenland in a state of panic.[86] People begin to realize that this is more than the attempt to deflect from Trump's inability to follow through with one of his major campaign promises, to lower prices, which on the contrary his bonkers tariff ideas will raise. This is another Trump hallmark, by the way, he throws an insanity into the world for shock value, enjoys the reactions, then realizes he actually likes the respective idea for real, and thus it may become real. Combined with the barely at all veiled threats of possible use of military force, it should be obvious that Trump doesn't even need excuse for his taste for blatant expansionism. He simply wants Greenland. That's enough. 'Since 5.45am we have been returning the fire, and from now on Greenlandic bombs will be met by bombs.'[87]
Which sets the tone for what Panama and Canada might be thinking about now, too.

Meanwhile Elon Musk hasn't been lazy either. He has made a virtual appearance at a campaign event of the AfD.[88] 'It's good to be proud of German culture, German values,' so Musk. 'and not to lose that in some sort of multiculturalism that dilutes everything.' What, like 'blood'? Mr. Musk is an open supporter of the AfD. And I'm sure they're very happy about it.

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86 https://www.theguardian.com/world/2025/jan/25/trump-greenland-denmark

87 https://en.wikipedia.org/wiki/1_September_1939_Reichstag_speech#

88 https://www.theguardian.com/technology/2025/jan/25/elon-musk-makes-surprise-appearance-at-afd-event-in-eastern-germany
I apologize for this footnote being the 88th, I assure you this is pure coincidence.

Dear NASA. Feel any conflict yet?

This is the man providing the space delivery vehicles that carries your astronauts, and other cargo. And by now Starliner is no longer a hope for an alternative, nor will any possible other vehicles that may come out of JPL minds. Now this man is in government. Well. Perhaps not technically. But effectively.
Curse on us for allowing their egos be thus confirmed, and to such degree.
The same goes for other space agencies. ESA, JAXA. At least where it's about human presence in space, on the ISS, later on the moon, Mars, the only choice you presently have is between Dragon and – what? Right. The Soyuz. Oh, well. We might get back to Soyuz rides to fill in soon.

I fully understand the need to protect NASA and its enormously ambitious and crucially important programs and missions.
The question is, will you remember what it's all for?
Or will you continue to shroud yourself in a bubble of delusion of never ceasing good work for the people of planet Earth, many if not most of which may grow to hate you, and doing it until there won't be any ground left from where to launch anything?
For the political ideology most thriving now across the globe is inevitably not only destructive, but self-destructive. To easily drag the rest of us down with it.

I fully understand the limits and obligations of a governmental agency. Limits dictated by answering to a governmental branch.
But indicating those limits is also a means to hide. To stick your head in the ground, and to ignore that what you do in the name of those to whom you answer makes you complicit. It's the old 'just following orders.'
We have been here before.
And you're already doing it, NASA. You may think you have no choice, for all the above mentioned reasons. And how will you continue? How will you continue, with Musk in control over your most important means to get humans into space, and in a government role, the same Musk who is ready to play, and is already playing with Trump, with Putin, with a German neo-Nazi party? How will you continue under an expansionist regime (a more apt word than 'administration'), that might very well seek to just take the sovereign land of what had hitherto been allies, or otherwise cripple them economically?

Everyone working at NASA has to ask themselves these question, just as anyone working at any other organisation based in the U.S. has to, and a number of affiliated ones outside.
Everyone.
What's it all worth, if the progress we're striving for, if the discoveries we're hoping to make, if it all will be made under the wing of fascism, and if the crucial real mandate of stewardship of this planet, to keep it hospitable to life, which is also a mandate of yours, is rapidly being degraded, with one consequence among many others being that your work has been in vain? With the means we see in place now, what good can be the end?
And for whom will this end be? For the people of Earth who will no longer be behind you?

I'm into science fiction. Both as a consumer, as well as actively. In Carl Sagan's only novel 'Contact' Earth's humans receive an unmistakable signal from extraterrestrial intelligence, that signal containing a message and an excerpt from the first terrestrial radio signal thought to have been powerful enough to leave the planet sent back to us, 'we got your message'.[89] Somewhat embarrassingly, that first terrestrial radio signal leaving the planet to be received by the aliens was Hitler's speech at the opening of the 1936 Olympic Games.

89 Carl Sagan, 'Contact', 1985, Simon & Schuster, ISBN 0-671-43400-4

I try, or rather I try not to imagine aliens initiating contact, but different from the fiction indeed *find* a society like that ruling the planet.
Either way, I feel that Sagan is joining Lincoln in the spinning. Especially if seeing NASA's apparent ready compliance.

So. What can be done? What could NASA possibly do?
Once again, I understand that the agency will feel bound by being a government agency. Also once again, I won't exclude the possibility of acting Administrator Petro seeing her primary task now as having to protect the agency. The question is always how far are you willing to go. This time you won't even have the lame excuse of acting in accordance of the mentality of the period.
It should be added that the purported reasoning behind this order, namely that decisions over advancing careers should be made on the basis of merit only, a reasoning meant to hide the Trump administration's true motivation of wanting to do with every trace of so-called 'woke agendas', and hiding it poorly, that the merit-argument can hardly apply with NASA and JPL. Jobs there are so highly demanding in skills that prospective employees will only get them if they're absolutely qualified. The reason why these jobs are filled with people across the spectrum of origin, culture, skin colour and gender is because such skills are not linked to any of these attributes. They're simply human skills. It might be that Petro set these new policies into action, with all their nasty tones, knowing, thinking, thinking she knows, that they will not affect NASA's employment policies and practices, meanwhile she has placating Trump and keeping the agency safe pocketed. The fallout is still hard to calculate. And the PR problem persists, present and future.

As announced, my advise won't satisfy, in the light of the Trump era lasting longer than four years and beyond him, and in the worst form we have to start imagining, even less. My advise may, if for a moment I fantasize about anyone acting on it, lead to failure. It's where we are. We're at Either Way. At neither choice being comfortable.
The best way to convey it, thus, is by supposing the best possible outcome. By supposing it'll indeed be only four years. That voting will continue to matter, that the party formerly known as Republicans will be trash-canned in the midterms, and that, come 2028, we'll see a sensible and smart person entering the White House, heading a sensible and smart administration, and with a hopefully smarter and more sensible Democratic party controlling both chambers in Congress.
This best case scenario is still not good, because we don't actually have four years. Four years are at this point a long time, particularly until returning to the already feeble efforts we've made in the combat against the climate catastrophe, four years during which things will be actively made worse, four years also during which we cannot dare hoping that Putin, the single individual who until this moment has caused the most harm in the world in recent history, will die or be replaced, or be replaced with someone sensible, to name just two of our global problems.
But, to make the point. Four years in the best case scenario after which the U.S. will have rid itself not only of Trump, but perhaps even of Trumpism, on behalf of the rest of the world, with everyone sensible having learned the lesson. Who knows, let's go full frontal optimism, perhaps the lesson will have been learned elsewhere, too.

So, my advice to the institutions, organisations and agencies would be to *actively* wait. Meaning to defy the unacceptable, and accept the consequences until the sun is shining brighter again.

Told you. Not very satisfying. Perhaps not quite clear either.
As established, where it concerns governmental agencies, they're tied to the government since they are part *of* the government, in that they're answering directly to the government. Congress decides over budgets, not the gift shop.
Meaning an agency like NASA will have a tough time should it try to resist anything. Crippling budget cuts, or even the complete withholding of any funds, change of leadership positions, placing people in these positions who *will* follow orders. And who then has to be opposed as well. And this

could lead to the abolishment of the agency, replacing it with something else. Hopefully only temporarily, in the best case scenario. But it would be extremely difficult for a Trump regime to do that with an agency this beneficial, including in economic terms, an agency that is actually quite powerful. With whom would be this highly skilled personnel replaced, if all of them 'had' to be replaced?

If we see it in the light of this best case scenario, all of this could be revoked with the next incoming administration. All of this would be rectified. Let them burn down your house before you let them burn your integrity. You can rebuild it later. You can rebuild when the storm has passed. If it passes. If not, then you won't have any stake anyway. There'd be no one for whom you do this work. Again, four years is long. It'd also be long for an agency like NASA. All the missions that would be delayed, cancelled. All the programs that would lay lame. Important missions and programs, we're not talking about the massive costs and waste alone. It would break my *heart*, seeing this. I want to be alive and around when Dragonfly reaches Titan. I'm emotionally deeply invested in a large number of programs and missions.
But the alternative would be complicity, and you probably ain't seen nothing yet. And the costs for that would be even higher. NASA would not only lose all trust, the people's trust, and by that I mean the trust of the people of Earth, not only lose all credentials, but indeed the right to this trust. You can't just follow orders. Not if these orders go against all ethical standards. At this moment it is still illegal for a soldier to follow illegal orders. Following such orders will not absolve the soldier of responsibility. Rightly so.

Cooperation, not only between individuals, and not only between members of the same tribe, but indeed between tribes are in the end the key to our future. The example of Russian cosmonauts cooperating with U.S., European and other nations' astronauts is a shining one. But one, as I argued, that can meet its limits rather soon, too.
Such a limit may be sooner reached when it's about cooperating with an adversary within. When the ethical dilemmas will confront you earlier and more directly. Asking you to decide between safety and your integrity, between a mandate set by the adversary or that set by humanity. With the possible consequence of the work having to be laid down.

But the work being delayed, it wouldn't be the first time. Think of the COVID lockdown. A lot of missions delayed, and for quite a while, having to wait for new launch windows in addition, with some not making it. This now would arguably be worse, perhaps much worse. Then again, what, besides a Musk-driven Mars program, could you otherwise accomplish in those four years, for the people of planet Earth? From NASA's position certainly not much in terms of keeping the surface of our planet survivable, if Trump has his way. Trump's U.S. has pulled out of the Paris agreement and will drive greenhouse gas emissions to excesses, with fallout to be expected around the globe, both environmental and political. They will likely boycott NASA's and JPL's efforts to contribute to monitoring and assessing the situation.
You will lose, no matter what. And we will lose with you.

If you think these fears are too dramatic, the picture painted way over the top, that I'm exaggerating the danger, then I truly hope you're right, I truly hope it won't turn out this dramatic, if I emerge as a fool I'll be the happiest man in the world. If you truly believe that it'll be only four years, your gains in opposing the unacceptable should be easier, the loss of trust, though, to come earlier.

It's hard to imagine NASA being a place of resistance. *As* a government agency, no less. But it'd be an ethical resistance. One that could bring down the house, forsooth. Great institutions have fallen. This one could be erected again, provided the world can be returned to good senses.

But if you keep the house going, and if you do it by the means of complicity, by sticking your head in the sand, then the still standing house may be shunned and berated when the light returns. It should be.

In the end it's a question of integrity. Plain and simple.
Will the agency in question allow itself to become a tool of an authoritarian regime, by pretending it has no choice because, whatever the system can be identified as, it's still the government? By remaining, seemingly safe, but certainly disconnected in its bubble?
Or will it accept boycott and retribution from this regime, the loss of work, the chance of dismantlement, in the hope that things will become worthy the dignity of the human being again, of *Homo sapiens*, and will it do its part to make this hope come true?

The first step, if you'll decide for the latter, is in demand now. It's to acknowledge. Don't hide behind the status quo, because it's already falling. Don't hide behind the assumption that your hands are tied, it'll only provide others the opportunity to tighten the knot. Acknowledge the reality. Acknowledge the dilemma. It's an ethical dilemma foremost. And if you're NASA, understand that you're already way behind this acknowledgement. You've been in this dilemma for a while now.

January 26th, 2025

Updates

Unsurprisingly it has not gotten better in the days since finishing this little effort. Pretty much everything Trump said and did must cause the lower alimentary system to frizz in cramps in every person of some decency.
Among the too many disastrous decisions made reality was Trump ordering the CDC to cut all communication with the WHO, the latter from which he has withdrawn the U.S.:

https://www.youtube.com/watch?v=x8BJ8Ubx1J0

Which is pure madness. We, as in the world, absolutely need a global network of communication between all health organisations to meet potential and actual outbreaks, including pandemics, in a preemptive and reactive way.

In an interview with MSNBC's Chris Hayes on The Late Show Stephen Colbert asked him whether one of Trump's donors had been Disease:

https://www.youtube.com/watch?v=LN1mh3fO9rk

I still haven't come across any major items pertaining the particularly disgusting order to snitch on potential 'offenders' against the DEI program prohibition. Closest to major comes yesterday's prelude to The Late Show with Stephen Colbert:

https://www.youtube.com/watch?v=rAyUKIub3-U

Which doesn't quite go far enough, to my taste.

There is a Guardian article by journalist and author Judith Levine that addresses the issue of government workers possible resistance to unconscionable Trump orders, and some tentative movements in that direction:

https://www.theguardian.com/commentisfree/2025/jan/27/government-workers-trump

The challenges of that will be different between the agencies, and much of what is being discussed in this article may or will not apply at NASA the way it applies with others.
I'd still say, the principle counts.

January 29th, 2025